

WHAT IS CLAIMED:

1. A transmyocardial implant for defining a blood flow pathway directly from a left ventricle to a coronary vessel, the implant comprising:
 - a coronary portion sized to be received within the vessel;
 - a myocardial portion sized to pass through the myocardium into the left ventricle;
 - a transition portion connecting the coronary and myocardial portion for directing blood flow from the myocardial portion to the coronary portion;
 - at least the coronary portion and the myocardial portion having an open construction for permitting tissue growth across a wall thickness of the coronary portion and the myocardial portion; and
 - at least the myocardial portion including an agent for controlling a coagulation cascade and platelet activation.
2. An implant according to claim 1 further comprising an agent for encouraging healing.
3. An implant according to claim 1 further comprising a porous lining in at least the myocardial portion with the porous lining have pores smaller than openings of the open construction of the myocardial portion.
4. An implant according to claim 1 wherein the porous lining contains the agent.

5. An implant according to claim 1 wherein the agent is heparin.
6. An implant according to claim 1 wherein the agent is an anti-coagulant.
7. An implant according to claim 1 wherein the agent is an anti-platelet.
8. An implant according to claim 2 wherein the agent for encouraging healing is a growth factor.
9. An implant according to claim 1 wherein the coronary portion is expandable from a first diameter to an enlarged second diameter.
10. An implant according to claim 1 wherein the myocardial portion is expandable from a first diameter to an enlarged second diameter.
11. An implant according to claim 1 wherein the transition portion permits articulation between the coronary portion and the myocardial portion.
12. A transmyocardial implant for defining a blood flow pathway directly from a left ventricle to a coronary vessel, the implant comprising:
 - a coronary portion sized to be received within the vessel;
 - a myocardial portion sized to pass through the myocardium into the left ventricle;

a transition portion connecting the coronary and myocardial portion for directing blood flow from the myocardial portion to the coronary portion; and

the myocardial portion including a construction to facilitate tissue integration and including an agent for controlling a coagulation cascade and platelet activation.

13. An implant according to claim 12 wherein the coronary portion includes an open structure to facilitate growth of vascular endothelial cells along the coronary portion.
14. An implant according to claim 12 wherein the myocardial portion includes a porous structure for facilitating growth of vascular endothelial cells into the myocardial portion.
15. An implant according to claim 14 wherein the porous structure includes a fabric liner.
16. An implant according to claim 14 wherein the myocardial portion further includes a wall structure for facilitating growth of structural cells into the interior of the myocardial portion.
17. An implant according to claim 16 wherein the wall structure is an open cell construction of the myocardial portion.